North Carolina Immunization Program Transportation Guidance for Vaccines

Transportation of vaccines should be a rare occurrence and expected length of transport should be less than 30 minutes. The CDC Storage and Handling Toolkit offers *transport* guidance based on current available data. If *transport* must occur, provider must use a thermometer with a current and valid certificate of calibration. It is strongly recommended that a digital data logger be used to transport vaccine.

Short-dated vaccine may be transferred to another NCIP provider with the approval of the NCIP and if the cold chain can be maintained. Providers must notify the NCIP of any vaccine doses that will expire before they can be administered at least four months before the expiration date to avoid restitution for improper inventory management. Providers must coordinate with the NCIP to transfer and document the transfer of vaccine between providers. Vaccine transfers between providers can occur only after receiving approval from the NCIP.

Transporting Refrigerated Vaccine

Guidelines for vaccine transport

Assemble packing supplies

1. **Cooler.** Use hard plastic Igloo-type coolers. Attach a "Vaccines: Do Not Freeze" label to the cooler.
2. **"Conditioned" cold packs.** Condition frozen gel packs by leaving them at room temperature for 1 to 2 hours until the edges have defrosted and packs look like they've been "sweating." Cold packs that are not conditioned can freeze vaccine. **Do not use dry ice.**
3. **Thermometer.** Prepare the thermometer by placing it in the refrigerator at least 2 hours before you pack the vaccine.
4. **Packing material.** Use two 2-inch layers of bubble wrap. Not using enough bubble wrap can cause the vaccine to freeze.

Pack vaccine

1. Cold packs

Spread conditioned cold packs to cover only half of the bottom of the cooler.

2. Bubble wrap & Thermometer

Completely cover the cold packs with a 2-inch layer of bubble wrap.
Then, place the thermometer/probe on top of the bubble wrap directly above a cold pack.

3. Vaccine

Stack layers of vaccine boxes on the bubble wrap. Do not let the boxes of vaccine touch the cold packs.

4. Bubble wrap

Completely cover the vaccine with another 2-inch layer of bubble wrap.

5. Cold packs

Spread "conditioned" cold packs to cover only half of the bubble wrap. Make sure that the cold packs do not touch the boxes of vaccine.

6. Form & display

Fill the cooler to the top with bubble wrap. Place the thermometer's digital display on top. It's ok if temperatures go above 46°F while packing.

As soon as you reach the destination site, check the vaccine temperature. If the vaccine is:

- Between 35°F and 46°F, put it in the refrigerator.
- Below 35°F or above 46°F, contact your VFC Rep or the VFC program immediately Then label the vaccine "Do Not Use" and put it in the refrigerator.

Transporting Frozen Vaccines

Guidelines for vaccine transport in emergency situations

- Routine transport of varicella-containing vaccines (MMRV and varicella vaccine) is not allowed. These vaccines should only be moved and transported when absolutely necessary.
- Make sure you have a vaccine emergency plan that includes the name and address of the destination site where you can take your frozen vaccine in an emergency.
- If vaccines must be transported, contact your VFC Program Representative or the VFC Program.
- Varicella-containing vaccines should preferably be transported under frozen conditions (below 5F or -15C).

  Do not freeze diluent for varicella-containing vaccines
- Vaccines must be placed in a freezer maintaining temperatures below 5F (-15C) immediately upon arrival at the backup storage facility.

Assemble packing supplies and documents

Most emergencies happen suddenly. Be sure you are prepared for emergency transport of frozen vaccine by always having the following supplies ready.

1. **Cooler.** Use hard plastic Igloo-type coolers.
2. **Frozen cold packs.** Keep enough frozen cold packs in your vaccine freezer to make two layers in the transport cooler. You will need 6-8 frozen packs per cooler. NEVER USE DRY ICE.
3. **Thermometer.** Keep a portable MIN/MAX thermometer in your vaccine freezer even if you normally use a continuous read thermometer for monitoring vaccine freezer temperatures.
4. **Packing materials.** Use any material like bubble wrap to place on top of the frozen cold packs to prevent contents from shifting. Make sure you DO NOT place bubble wrap between the vaccine and frozen packs.

Pack vaccines and prepare for transport

Prepare for transport

- Verify that the destination site has enough room for your vaccine and that someone will be there when the vaccine arrives.
- Verify that you have all the packing supplies on the above list.

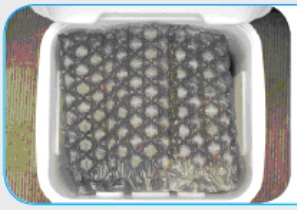
Pack vaccines

Spread a layer of frozen ice packs to cover the bottom of the cooler. Do not use dry ice. 1

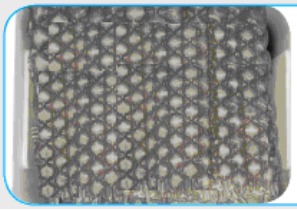
Stack layers of vaccine boxes directly on top of the frozen ice packs. 2

Place the thermometer probe with the top layer of vaccine. 3

Spread another layer of frozen ice packs to cover the vaccine. 4



Fill the cooler to the top with insulation material (bubble wrap). 5



Place the thermometer's display on top of the insulation/packing material. Then close the cooler and transport the vaccine. 6